

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE  
in its capacity as elected Office

<b>Date of mailing</b> (day/month/year) 26 January 2001 (26.01.01)	<b>Applicant's or agent's file reference</b>
<b>International application No.</b> PCT/BR00/00068	<b>Priority date</b> (day/month/year) 22 June 1999 (22.06.99)
<b>International filing date</b> (day/month/year) 21 June 2000 (21.06.00)	
<b>Applicant</b> NAKAIE, Clovis, Ryuichi et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
12 December 2000 (12.12.00)

☐ in a notice effecting later election filed with the International Bureau on:  
\_\_\_\_\_

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	<b>Authorized officer</b> Juan Cruz Telephone No.: (41-22) 338.83.38
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## PATENT COOPERATION TREATY

PCT

NOTIFICATION CONCERNING  
AMENDMENTS OF THE CLAIMS(PCT Rule 62 and  
Administrative Instructions, Section 417)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE

in its capacity as International Preliminary Examining Authority

Date of mailing (day/month/year)

26 January 2001 (26.01.01)

International application No.

PCT/BR00/00068

International filing date (day/month/year)

21 June 2000 (21.06.00)

Applicant

CONSELHO NACIONAL DE DESENVOLVIMENTO CIENTÍFICO E TECNOLÓGICO - CNPQ et al

The International Bureau hereby informs the International Preliminary Examining Authority that no amendments under Article 19 have been received by the International Bureau (Administrative Instructions, Section 417).

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

Juan Cruz

Telephone No. (41-22) 338.83.38

## PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

EURY PEREIRA, Luna-Filho  
Avenida W3 Norte, Quadra 507/B,  
Lote 2  
SEPN, Suite 211  
CEP-70741-901 Brasilia, DF  
BRÉSILDate of mailing (day/month/year)  
26 January 2001 (26.01.01)

Applicant's or agent's file reference

## IMPORTANT NOTIFICATION

International application No.  
PCT/BR00/00068International filing date (day/month/year)  
21 June 2000 (21.06.00)

## 1. The following indications appeared on record concerning:

☒ the applicant ☒ the inventor ☐ the agent ☐ the common representative

Name and Address

NAKAIE, Clovis, Ryuichi  
CEP-São Paulo, SP  
Brazil

State of Nationality

BR

State of Residence

BR

Telephone No.

Facsimile No.

Teleprinter No.

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☐ the name ☒ the address ☐ the nationality ☐ the residence

Name and Address

NAKAIE, Clovis, Ryuichi  
Rua 3 de maio 100  
CEP 04044-020 São Paulo  
Brazil

State of Nationality

BR

State of Residence

BR

Telephone No.

Facsimile No.

Teleprinter No.

## 3. Further observations, if necessary:

## 4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned  
☐ the International Searching Authority ☒ the elected Offices concerned  
☒ the International Preliminary Examining Authority ☐ other:The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Juan Cruz

Telephone No.: (41-22) 338.83.38

## PATENT COOPERATION TREATY

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NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

EURY PEREIRA, Luna-Filho  
Avenida W3 Norte, Quadra 507/B,  
Lote 2  
SEPN, Suite 211  
CEP-70741-901 Brasilia, DF  
BRÉSILDate of mailing (day/month/year)  
26 January 2001 (26.01.01)

Applicant's or agent's file reference

## IMPORTANT NOTIFICATION

International application No.  
PCT/BR00/00068International filing date (day/month/year)  
21 June 2000 (21.06.00)

## 1. The following indications appeared on record concerning:

☒ the applicant ☒ the inventor ☐ the agent ☐ the common representative

Name and Address

TOMINAGA, Mineko  
São Paulo Brazil

State of Nationality

BR

State of Residence

BR

Telephone No.

Facsimile No.

Teleprinter No.

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☐ the name ☒ the address ☐ the nationality ☐ the residence

Name and Address

TOMINAGA, Mineko  
Rua Tabapuã 452, apto. 102  
CEP 04533-001 São Paulo  
Brazil

State of Nationality

BR

State of Residence

BR

Telephone No.

Facsimile No.

Teleprinter No.

## 3. Further observations, if necessary:

## 4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned  
☐ the International Searching Authority ☒ the elected Offices concerned  
☒ the International Preliminary Examining Authority ☐ other:The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Juan Cruz

Facsimile No.: (41-22) 740.14.35

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING  
OF A CHANGE

(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

EURY PEREIRA, Luna-Filho  
Avenida W3 Norte, Quadra 507/B,  
Lote 2  
SEPN, Suite 211  
CEP-70741-901 Brasilia, DF  
BRÉSIL

Date of mailing (day/month/year) 26 January 2001 (26.01.01)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference	
International application No. PCT/BR00/00068	International filing date (day/month/year) 21 June 2000 (21.06.00)

1. The following indications appeared on record concerning:

☒ the applicant ☒ the inventor ☐ the agent ☐ the common representative

Name and Address DE MATTOS PAIVA, Antonio, Cechelli CEP-São Paulo, SP Brazil	State of Nationality BR	State of Residence BR
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☐ the name ☒ the address ☐ the nationality ☐ the residence

Name and Address DE MATTOS PAIVA, Antonio, Cechelli Rua 3 de maio 100 CEP 04044-020 São Paulo Brazil	State of Nationality BR	State of Residence BR
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned  
☐ the International Searching Authority ☒ the elected Offices concerned  
☒ the International Preliminary Examining Authority ☐ other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Juan Cruz Telephone No.: (41-22) 338.83.38
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## PATENT COOPERATION TREATY

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NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

EURY PEREIRA, Luna-Filho  
Avenida W3 Norte, Quadra 507/B,  
Lote 2  
SEPN, Suite 211  
CEP-70741-901 Brasilia, DF  
BRÉSIL

Date of mailing (day/month/year) 26 January 2001 (26.01.01)	
Applicant's or agent's file reference	IMPORTANT NOTIFICATION
International application No. PCT/BR00/00068	International filing date (day/month/year) 21 June 2000 (21.06.00)

## 1. The following indications appeared on record concerning:

☒ the applicant ☒ the inventor ☐ the agent ☐ the common representative

## Name and Address

DOS REIS BARBOSA, Simone  
CEP-São Paulo, SP  
Brazil

## State of Nationality

BR

## State of Residence

BR

Telephone No.

Facsimile No.

Teleprinter No.

## 2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☐ the name ☒ the address ☐ the nationality ☐ the residence

## Name and Address

DOS REIS BARBOSA, Simone  
Rua 3 de maio 100  
CEP 04044-020 São Paulo  
Brazil

## State of Nationality

BR

## State of Residence

BR

Telephone No.

Facsimile No.

Teleprinter No.

## 3. Further observations, if necessary:

## 4. A copy of this notification has been sent to:

<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Juan Cruz

Telephone No.: (41-22) 338.83.38

# PATENT COOPERATION TREATY

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From the INTERNATIONAL BUREAU

## NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

To:

EURY PEREIRA, Luna-Filho  
Avenida W3 Norte, Quadra 507/B,  
Lote 2  
SEPN, Suite 211  
CEP-70741-901 Brasilia, DF  
BRÉSIL

<b>Date of mailing</b> (day/month/year) 26 January 2001 (26.01.01)	<b>IMPORTANT NOTIFICATION</b>
<b>Applicant's or agent's file reference</b>	
<b>International application No.</b> PCT/BR00/00068	<b>International filing date</b> (day/month/year) 21 June 2000 (21.06.00)

1. The following indications appeared on record concerning:		
<input checked="" type="checkbox"/> the applicant	<input checked="" type="checkbox"/> the inventor	<input type="checkbox"/> the agent <input type="checkbox"/> the common representative
Name and Address MARCHETTO, Reinaldo CEP-São Paulo, SP Brazil	State of Nationality BR	State of Residence BR
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:		
<input type="checkbox"/> the person	<input type="checkbox"/> the name	<input checked="" type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence
Name and Address MARCHETTO, Reinaldo Caixa Postal 355 Araraquara CEP 14801-970 São Paulo Brazil	State of Nationality BR	State of Residence BR
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	
3. Further observations, if necessary:		
4. A copy of this notification has been sent to:		
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned	
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned	
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:	

<p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No.: (41-22) 740.14.35</p>	<p>Authorized officer</p> <p>Juan Cruz</p> <p>Telephone No.: (41-22) 338.83.38</p>
--	--

## PCT COOPERATION TREATY

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From the INTERNATIONAL BUREAU

NOTIFICATION OF THE RECORDING  
OF A CHANGE(PCT Rule 92bis.1 and  
Administrative Instructions, Section 422)

To:

EURY PEREIRA, Luna-Filho  
Avenida W3 Norte, Quadra 507/B,  
Lote 2  
SEPN, Suite 211  
CEP-70741-901 Brasília, DF  
BRÉSIL

Date of mailing (day/month/year) 26 January 2001 (26.01.01)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference	
International application No. PCT/BR00/00068	International filing date (day/month/year) 21 June 2000 (21.06.00)

1. The following indications appeared on record concerning:		
<input checked="" type="checkbox"/> the applicant	<input checked="" type="checkbox"/> the inventor	<input type="checkbox"/> the agent <input type="checkbox"/> the common representative
Name and Address SCHREIER, Shirley CEP-São Paulo, SP Brazil	State of Nationality BR	State of Residence BR
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:		
<input type="checkbox"/> the person	<input type="checkbox"/> the name	<input checked="" type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence
Name and Address SCHREIER, Shirley Caixa Postal 26077 CEP 05599-970 São Paulo Brazil	State of Nationality BR	State of Residence BR
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	
3. Further observations, if necessary:		
4. A copy of this notification has been sent to:		
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned	
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned	
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Juan Cruz Telephone No.: (41-22) 338.83.38
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## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

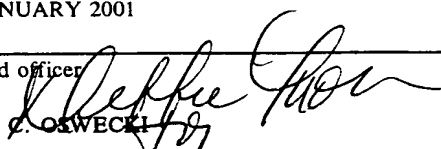
Applicant's or agent's file reference NONE	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/BR00/00068	International filing date (day/month/year) 21 JUNE 2000	Priority date (day/month/year) 22 JUNE 1999
International Patent Classification (IPC) or national classification and IPC IPC(7): C07D 207/46, 295/24 and US Cl.: 548/528, 531		
Applicant CONSELHO NACIONAL DE DESENVOLVIMENTO CIENTIFICO & E TECNOLÓGICO		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 12 DECEMBER 2000	Date of completion of this report 05 JANUARY 2001
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer  JANE C. OSWECKI
Facsimile No. (703) 305-3230	Telephone No. (703) 308-1235

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/BR00/00068

**I. Basis of the report****1. With regard to the elements of the international application:\***☒ the international application as originally filed☒ the description:

pages 1-8, as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_

☒ the claims:

pages 9, as originally filed  
pages NONE, as amended (together with any statement) under Article 19  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_

☒ the drawings:

pages 10-17, as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_

☒ the sequence listing part of the description:

pages NONE, as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_

**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).  
☐ the language of publication of the international application (under Rule 48.3(b)).  
☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:**

- ☐ contained in the international application in printed form.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority in written form.  
☐ furnished subsequently to this Authority in computer readable form.  
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

**4. ☒ The amendments have resulted in the cancellation of:**

- ☒ the description, pages NONE  
☒ the claims, Nos. NONE  
☒ the drawings, sheets/fig NONE

**5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\***

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\*Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/BR00/00068

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. statement**

Novelty (N)

Claims	<u>1-3</u>	YES
Claims	<u>NONE</u>	NO

Inventive Step (IS)

Claims	<u>1-3</u>	YES
Claims	<u>NONE</u>	NO

Industrial Applicability (IA)

Claims	<u>1-3</u>	YES
Claims	<u>NONE</u>	NO

**2. citations and explanations (Rule 70.7)**

Claims 1-3 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest a spin-labelling reagent that is a 2,2,5,5-tetramethylpyrrolidine-N-oxyl derivative compound having both carboxylic acid and amino functional groups, and a fluorenylmethoxycarbonyl substituent.

The applicants claim a spin-probe or spin-labelling reagent compound that is a beta-amino acid-type derivative 2,2,5,5-tetramethylpyrrolidine-N-oxyl-(9-fluorenylmethoxycarbonyl)-3-amine-4-carboxylic acid. This compound has utility as a probe or "reporter" compound for chemical and biological macromolecules, especially peptide sequences.

The closest prior art of record is U.S. 3,966,764 to Goldstein et al. Goldstein et al. teaches spin-labeled reagents and ligand determination of spin-labelled compounds (U.S. 3,966,764, Abstract; col. 86, line 50 to col. 87, line 14). The reagent compounds taught by Goldstein et al. are phenyl-propylamino-crotonamido-, phenyl-propyl-glycinamido-, aminopropyl-phenoxy-acetamido- and phenyl-propylamino-pentanamido-2,2,5,5-tetramethylpyrrolidine-1-oxyl compounds (U.S. 3,966,764, col. 88, lines 4-15). Goldstein et al. neither teaches nor suggests 2,2,5,5-tetramethylpyrrolidine-1-oxyl derivative compounds having both amino and carboxylic acid functional groups, nor such compounds having a fluorenyl moiety. Thus, the instant claims 1-3 are found to be novel, have an inventive step and industrial applicability.

----- NEW CITATIONS -----  
NONE

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/BR00/00068

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/BR00/00068

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C07D, 207/46, 295/24

US CL : 548/528, 531

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 548/528, 531

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CAS ONLINE, CAPLUS, BEILSTEIN, EAST, WEST

search terms: tetramethylpyrrolidin?, amin?, carboxylic(L)acid, spin(L)label(L)reagent?, fluoren?

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,966,764 A (GOLDSTEIN et al) 29 June 1976, see entire document.	1-3



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

16 OCTOBER 2000

Date of mailing of the international search report

04 DEC 2000

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

JANE C. OSWECKI

Telephone No. (703) 308-1235

# PATENT COOPERATION TREATY

**PCT**

## NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:

EURY PEREIRA, Luna-Filho  
Avenida W3 Norte, Quadra 507/B,  
Lote 2  
SEPN, Suite 211  
CEP-70741-901 Brasilia, DF  
BRÉSIL

Date of mailing (day/month/year) 28 December 2000 (28.12.00)		
Applicant's or agent's file reference		<b>IMPORTANT NOTICE</b>
International application No. PCT/BR00/00068	International filing date (day/month/year) 21 June 2000 (21.06.00)	
		Priority date (day/month/year) 22 June 1999 (22.06.99)
Applicant CONSELHO NACIONAL DE DESENVOLVIMENTO CIENTÍFICO E TECNOLÓGICO - CNPQ et al		

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:

US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

EP, JP

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 28 December 2000 (28.12.00) under No. WO 00/78715

### REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

### REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. (41-22) 740.14.35	Authorized officer  J. Zahra  Telephone No. (41-22) 338.83.38
--	---

Continuation of Form PCT/IB/308

**NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF  
THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES**

<b>Date of mailing (day/month/year)</b> 28 December 2000 (28.12.00)	<b>IMPORTANT NOTICE</b>
<b>Applicant's or agent's file reference</b>	<b>International application No.</b> PCT/BR00/00068
<p>The applicant is hereby notified that, at the time of establishment of this Notice, the time limit under Rule 46.1 for making amendments under Article 19 has not yet expired and the International Bureau had received neither such amendments nor a declaration that the applicant does not wish to make amendments.</p>	

22 JAN 2001

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

004430/01-8

To:  
EURY PEREIRA, LUNA-FILHO  
AVENIDA W 3 NORTE, QUADRA 507/B, LOTE 2  
SEPN SUITE 211  
BRASILIA, DISTRITO FEDERA, BRAZIL 70741  
-901

NOTIFICATION CONCERNING PAYMENT OF  
THE PRELIMINARY EXAMINATION  
AND HANDLING FEES

(PCT Rules 57 and 58 and  
Administrative Instructions, Section 615)

Date of mailing  
(day/month/year)

03 JAN 2001

Applicant's or agent's file reference

PAYMENT DUE

see item 3 for time limit

International application No.

PCT/BR00/00068

International filing date  
(day/month/year)

21 JUN 00

Applicant

CONSELHO NACIONAL DE DESENVOLVIMENTO CIENTIFICO &amp; E TECNOLÓGICO

1. The applicant is hereby notified that this International Preliminary Examining Authority has received:

☐ the payment of all the prescribed fees, and ☐ an overpayment, which will be refunded in due course.

☒ no or insufficient payment of the prescribed fees and the applicant is hereby invited to pay the balance due, as summarized under item 2, within the time limit indicated under item 3.

2. Fees and payment calculation:

Preliminary  
examination fee

490.00 [P]

Handling fee\*

+

137.00 [H]

Total fees payable = 627.00 - 0.00 = 627.00

Amount paid

Balance

\* Applicants from certain States are entitled to a reduction of 75% of the handling fee. Where the applicant is (or all applicants are) so entitled, the amount to be entered at H is 25% of the handling fee. See Notes to the Fee Calculation Sheet annexed to the Demand Form, PCT/IPEA/401, for details.

3. Time limit for payment and amount payable (Rules 57.3 and 58.1(b)):

☐ within ONE MONTH from the date on which the demand was submitted (see below), in which case the amount payable is the amount applicable on that date of submittal:

☐ within ONE MONTH from the date of receipt (see below) of the demand by this Authority (where the demand was transmitted to this Authority under Rule 59.3), in which case the amount payable is the amount applicable on that date of receipt:

12 DECEMBER 2000

Name and mailing address of the IPEA/  
Assistant Commissioner for Patent  
Box PCT  
Washington, D.C. 20231 Attn:RO/US  
Facsimile No. 703-305-3230

Authorized officer

RAYNA LOVER

Telephone No. 703 308-8297

Form PCT/IPEA/403 (July 1998)



# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

### NOTIFICATION OF RECEIPT OF DEMAND BY COMPETENT INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

(PCT Rules 59.3(e) and 61.1(b), first sentence  
and Administrative Instructions, Section 601(a))

To:  
EURY PEREIRA, LUNA-FILHO  
AVENIDA W 3 NORTE, QUADRA 507/B, LOTE 2  
SEPN SUITE 211  
BRASILIA, DISTRITO FEDERA, BRAZIL 70741  
-901

Date of mailing  
(day/month/year)

**03 JAN 2001**

Applicant's or agent's file reference

**IMPORTANT NOTIFICATION**

International application No.

PCT/BR00/00068

International filing date (day/month/year)

21 JUN 00

Priority date (day/month/year)

22 JUN 99

Applicant

CONSELHO NACIONAL DE DESENVOLVIMENTO CIENTIFICO & E TECNOLÓGICO

1. The applicant is hereby notified that this International Preliminary Examining Authority considers the following date as the date of receipt of the demand for international preliminary examination of the international application:

12 DECEMBER 2000 (12.12.00)

2. That date of receipt is:



the actual date of receipt of the demand by this Authority (Rule 61.1(b)).



the actual date of receipt of the demand on behalf of this Authority (Rule 59.3(e)).



the date on which this Authority has, in response to the invitation to correct defects in the demand (Form PCT/IPEA/404), received the required corrections.

3. ☐

**ATTENTION:** That date of receipt is **AFTER** the expiration of 19 months from the priority date. Consequently, the election(s) made in the demand does (do) not have the effect of postponing the entry into the national phase until 30 months from the priority date (or later in some Offices) (Article 39(1)). Therefore, the acts for entry into the national phase must be performed within 20 months from the priority date (or later in some Offices) (Article 22). For details, see the *PCT Applicant's Guide*, Volume II.



(If applicable) This notification confirms the information given by telephone, facsimile transmission or in person on:

4. Only where paragraph 3 applies, a copy of this notification has been sent to the International Bureau.

Name and mailing address of the IPEA/  
Assistant Commissioner for Patent  
Box PCT  
Washington, D.C. 20231 Attn: RO/US  
Facsimile No. 703-305-3230

Authorized officer

RAYNA LOVER

Telephone No. 703 308-8297

Ofício nº. 0011/2001

Brasília, DF, January 24<sup>th</sup>, 2001

**ASSISTANT COMMISSIONER OF PATENTS**

To the attention of  
Ms. Carol Bidwell  
PCT Special Program Officer Supervisor  
USPTO  
Crystal City  
Box PCT  
Washington, D.C. 202231

Facsimile 00 23 1 703 305 2919

Re: International Appln. No. PCT/BR00/00068 of 21<sup>st</sup> June, 2000  
*"Synthesis of a novel paramagnetic aminoacid derivative (EPM-5) for labelling different macromolecules and systems of biological interest"*

Dear Sirs,

I am informing you that we have already effected payment of the preliminary examination and handling fees amounting to US\$627.00 (six hundred and twenty seven dollars), through our Bankers at New York, relating to Chapter II proceedings for this PCT internacional application.

We apologize for the delay incurred and hope that we could proceed with this PCT patent application in good order.

Failure on our part in effecting regular payment within 30 (thirty) days from the date of receipt of th Chapter II Demand (12 December 2000) by the USPTO, resulted from Christmas' Hollydays and New Eve's leaves causing an unusual backlog of work in our Accountant's office and loss of internal memoranda requesting timely payment.

Find enclosed herewith copy of instructions already sent to our Bankers on this date.

Please, keep us informed of next procedures to perform in order to not allow this application to be abandoned.

Faithfully Yours,

  
Eury P Luna Filho

Encls. 01 (one)



**CNPq**

CONSELHO NACIONAL DE DESENVOLVIMENTO  
CIENTÍFICO E TECNOLÓGICO

**CNPq-CONSELHO NACIONAL DE DESENV. CIENTÍFICO E TECNOLÓGICO**

**CAIXA POSTAL/P.O. BOX 6186 –  
BRASÍLIA/DF 70740910 BRASIL  
FONES/PHONE: (061) 348-9027 –  
348-9028**

**FAX N.º: (061) 272-1560  
M E N S A G E M // M E S A G E**

**DE/FROM: GILBERTO PEREIRA XAVIER  
PARA/TO: BANCO DO BRASIL AGÊNCIA NEW YORK  
DATA: 23/01/01  
ATT. Sr.ª CARLA MELLO  
CHAVE : 46968  
2001ADC00004**

**Solicitamos a V.Sª no sentido de que seja efetuado o pagamento em favor do beneficiário ASSISTANT COMMISSIONER OF PATENTES, no valor de US\$ 627,00 (seiscentos e vinte e sete dólares), referente a pagamento de exame preliminar internacional (PCT, artigo 33) pedido internacional de patente PCT/BR00/00068, d 21 de junho de 2000, conforme OF.PROJUR s/nº/2000 de 12.12.2000.**

**Favor debitar a nossa conta corrente número 841040115, existente nessa Agência em nome do CNPq.**

**INFORMAÇÕES COMPLEMENTARES:**

**CRISTAL CITY  
BOX PCT  
WASHINGTON DC 202231  
USA**

**Atenciosamente,**

  
**GILBERTO PEREIRA XAVIER  
Coordenador de Gestão Orçamentária e Financeira**

  
**FERNANDO AUGUSTO BERNARDES NORMANDO  
Coordenador Geral de Administração e Finanças**

**NL00007**

\*\*\*\*\*  
\*  
\* TRANSACTION REPORT  
\* JAN-25-01 08:26 AM  
\* FOR: CNPa 061 3489499  
\*  
\* SEND  
\*  
\* DATE START RECEIVER PAGES TIME NOTE  
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\* JAN-25 08:25 AM 36985690002117033052 1 29" OK  
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TRANSACTION REPORT

JAN-25-01 08:28 AM

FOR: CNPa

061 3489499

SEND

DATE	START	RECEIVER	PAGES	TIME	NOTE
JAN-25	08:27 AM	36985690002117033052	1	30"	OK

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## PCT COOPERATION TREATY

PCT

INFORMATION CONCERNING ELECTED  
OFFICES NOTIFIED OF THEIR ELECTION

(PCT Rule 61.3)

From the INTERNATIONAL BUREAU

To:

EURY PEREIRA, Luna-Filho  
Avenida W3 Norte, Quadra 507/B,  
Lote 2  
SEPN, Suite 211  
CEP-70741-901 Brasilia, DF  
BRÉSIL

Date of mailing (day/month/year)

26 January 2001 (26.01.01)

Applicant's or agent's file reference

## IMPORTANT INFORMATION

International application No.

PCT/BR00/00068

International filing date (day/month/year)

21 June 2000 (21.06.00)

Priority date (day/month/year)

22 June 1999 (22.06.99)

Applicant

CONSELHO NACIONAL DE DESENVOLVIMENTO CIENTÍFICO E TECNOLÓGICO - CNPQ et al

1. The applicant is hereby informed that the International Bureau has, according to Article 31(7), notified each of the following Offices of its election:

EP :AT,BE,CH,CY,DE,DK,ES,FI,FR,GB,GR,IE,IT,LU,MC,NL,PT,SE

National :JP,US

2. The following Offices have waived the requirement for the notification of their election; the notification will be sent to them by the International Bureau only upon their request:

None

3. The applicant is reminded that he must enter the "national phase" **before the expiration of 30 months from the priority date** before each of the Offices listed above. This must be done by paying the national fee(s) and furnishing, if prescribed, a translation of the international application (Article 39(1)(a)), as well as, where applicable, by furnishing a translation of any annexes of the international preliminary examination report (Article 36(3)(b) and Rule 74.1).

Some offices have fixed time limits expiring later than the above-mentioned time limit. For detailed information about the applicable time limits and the acts to be performed upon entry into the national phase before a particular Office, see Volume II of the PCT Applicant's Guide.

The entry into the European regional phase is postponed until **31 months from the priority date** for all States designated for the purposes of obtaining a European patent.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 G neva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer:

Juan Cruz

Telephone No. (41-22) 338.83.38

From the INTERNATIONAL SEARCHING AUTHORITY

To: EURY PEREIRA, LUNA-FILHO  
AVENIDA W3 NORTE, QUADRA 507/B, LOTE 2  
SEPN SUITE 211  
BRASILIA, DISTRITO FEDERA, BRAZIL 70741-901

PCT

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT  
OR THE DECLARATION

(PCT Rule 44.1)

Date of Mailing (day/month/year) 04 DEC 2000	
Applicant's or agent's file reference O	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/BR00/00068	International filing date (day/month/year) 21 JUNE 2000
Applicant CONSELHO NACIONAL DE DESENVOLVIMENTO CIENTIFICO & E TECNOLÓGICO	

1. ☒ The applicant is hereby notified that the international search report has been established and is transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

**When?** The time limit for filing such amendments is normally 2 months from the date of transmittal of the international search report; however, for more details, see the notes on the accompanying sheet.

**Where?** Directly to the International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland  
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in rules 90 bis 1 and 90 bis 3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer JANE C. OSWECKI
Facsimile No. (703) 305-3230	Telephone No. (703) 308-1235

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference O	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/BR00/00068	International filing date (day/month/year) 21 JUNE 2000	(Earliest) Priority Date (day/month/year) 22 JUNE 1999
Applicant CONSELHO NACIONAL DE DESENVOLVIMENTO CIENTIFICO & E TECNOLOGICO		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
2. ☐ **Certain claims were found unsearchable** (See Box I).
3. ☐ **Unity of invention is lacking** (See Box II).
4. With regard to the **title**,
- ☐ the text is approved as submitted by the applicant.
- ☒ the text has been established by this Authority to read as follows:
- SYNTHESIS OF A NOVEL PARAMAGNETIC AMINO ACID DERIVATIVE (EPM-5) FOR LABELLING CHEMICAL AND BIOLOGICAL MACROMOLECULES**
5. With regard to the **abstract**,
- ☐ the text is approved as submitted by the applicant.
- ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. The figure of the **drawings** to be published with the abstract is Figure No. 1
- ☒ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.
- ☐ None of the figures.



## Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The present invention refers to the synthesis and application of 2,2,5,5-tetramethylpyrrolidine-N-oxyl-(9-fluorenylmethyloxycarbonyl)-3-amine-4-carboxylic acid, a novel paramagnetic (spin label) amino acid derivative denominated as Fmoc-POAC whose structure is seen in Figure 1. Fmoc-POAC can be coupled to peptide sequences and other systems. It can be inserted anywhere in a peptide segment, even at an internal position, after removal of its temporary amine protecting group, Fmoc. Owing to its pyrrolidine structure, this molecule may induce differentiated conformations if compared with the normal alpha-amino acids, thus becoming a valuable probe for structural-biological activity of certain peptides. The POAC-angiotensin II analogue was synthesized as a model according to the use of the chemical derivative.

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/BR00/00068

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C07D 207/46, 295/24

US CL : 548/528, 531

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 548/528, 531

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CAS ONLINE, CAPLUS, BEILSTEIN, EAST, WEST

search terms: tetramethylpyrrolidin?, amin?, carboxylic(L)acid, spin(L)label(L)reagent?, fluoren?

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,966,764 A (GOLDSTEIN et al) 29 June 1976, see entire document.	1-3

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

16 OCTOBER 2000

Date of mailing of the international search report

04 DEC 2000

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

JANE C. OSWECKI

Telephone No. (703) 308-1235